

REMARKS

Claims 30-62 have been canceled in compliance with the restriction requirements, claims 1-28 and 64-65 are amended and claim 63 is cancelled. Further, the title and Figures 8B and 10A have been amended, the amended sections and drawings replacing all previously submitted versions. The Applicant has carefully and thoughtfully considered the Office Action and the comments therein. For the reasons given below, it is submitted that this application is in condition for allowance.

Objections to the Drawings

In the Action on page 2 in section 1, the Examiner indicates that it is unclear whether the replacement drawings submitted in the responses filed 10/14/2004 and 2/8/2005 were replacement drawings. Initially, the drawings were objected to under 37 C.F.R. § 1.83(a) as not showing every feature of the invention specified in claims. Specifically the objection noted that “the klaxon, the horn, the light, the plurality of lights, the LCD panel, the simulated human voice, the human voice, the light emitting diode, the plurality of light emitting diodes” of claim 8 and “the one-way charging diode...comprises an at least one SCR” claimed in claims 15 and 16 and “the signal processor, the lookup tables, the memory device, the security protocol/encryption element, the VI sensor, etc.” claimed in claim 20, must be shown in the drawings or cancelled from the claims. The features claimed in claim 8, 15, 16, and 20, were submitted in amended drawings for figures 8B and 10A, which have been clearly marked as REPLACEMENT SHEETS. In particular, as per claim 20 and the LCD Panel of claim 8, the features of these claims are shown in amended Figure 8B, items 700 and 775 as amended.

Further, on page 2, section 2 of the office action the drawings were objected to under 37 C.F.R. § 1.83(a) as not showing every feature of the invention specified in claims. Specifically, the action indicates that “sensors 710, 720, 730, and 740, the switch position sensor, the trigger must be clearly shown or cancelled from the claims.”

As per the objection to the remaining elements of claim 8, the features of this claim are shown in amended Figure 10A. It is also noted that elements 710 and 740 are shown, labeled, and described as “sensors can for instance be, but are not limited to, VI sensors” (Applicants’ specification, paragraph 139). It is unclear what additional labeling or description is required.

With respect to the reference to a trigger, it is presumed that this refers to the trigger recited in amended claim 29. The amended claim 29 clearly indicates that the trigger is on the controller. The controller is clearly indicated in the drawings and, therefore, the trigger is equally described and disclosed. Hence, because the features of claims 8, 15, 16 and 20 are shown in the drawings, Applicant respectfully requests that the objections to the drawings be rescinded.

Claims Objections

In the action, on page 3, sections 3 and 4, the Action objects to claims 1 and 64 because of an informalities. The informalities have been addressed and the claims amended to correct the minor typographical errors.

35 U.S.C. §102 Rejection

In the Action on page 4, section 7, claims 1, 3-8, 10-18, and 29 are rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Nowakowski (U.S. Patent Number 6,639,384).

Firstly, applicants note that the Action makes an equivalency argument, admitting the Nowakowski reference fails to provide a switching device having at least two operating positions. The Action goes on to assert that the conductive/non-conductive states of the transistor 44 in Nowakowski are equivalent. However, as set forth in MPEP section 2183, entitled “Making a Prima Facie Case of Equivalence”, a three part test is provided for equivalency which requires the examiner find that the components of the prior art “(A) performs the function specified in the claim, (B) is not excluded by any explicit definition provided in the specification for an equivalent, and **(C) is an equivalent of the means-(or step-) plus-function limitation.**” The Action correctly steps through parts (A) and (B), but fails to address part (C). Applicants note that no means plus function language exists in the claims, thus the claims are not means or step plus function claims under the majority test for such claims and §112(6). Thus, the action fails to apply the proper prima facie test for equivalence, as delineated in the MPEP, and the equivalence argument does not apply. However, even if the transistor 44 can be construed as a switching device in its conductive/non-conductive states, Nowakowski does not anticipate the amended claims as it fails to teach a number of the positively recited elements of the claims.

As to amended claim 1, Nowakowski does not teach several limitations of amended claim 1. Nowakowski specifically discloses a “pair of series-connected batters that can energize an electric cranking motor” (Nowakowski, Abstract, linses2-3) and goes on to explain that the pair of series batteries is designated as an “accessory battery 26” which is a

12-volt battery which is in turn connected in series with a “cranking battery 40 which is utilized only for energizing an electric cranking motor.” (lines 10-16, col2). The switch 40 energizes the cranking battery 30 in conjunction with the accessory battery 26 in a series circuit. As disclosed, it is not possible to isolate the cranking battery from the accessory battery. As stated at column 3, lines 20-24, the closure of the switches “applies the combined terminal voltages of the batteries 26 and 30 to the cranking motor 70 so that it is energized with 16 volts.”

The two batteries of Nowakowski cannot be coupled in a manner by the switching device that isolates the first battery from the at least one standby battery as positively recited in amended claim 1. Nor can the two batteries of Nowakowski be coupled in a manner that permits either the main or an at least on standby battery to exclusively start and operate the electrical system. Instead, the Nowakowski reference, as with the newly submitted Dierker reference and all previously cited art, requires both batteries to be coupled to one another at startup or cranking of the electrical system. Thus, the amended claims are allowable over the teachings of Nowakowski, as Nowakowski is incapable of providing starting and operation selectively and exclusively from either a main battery or an at least one standby battery as positively recited.

As Nowakowski does not provide for the positively recited elements of claim 1 as argued above, withdrawal of the rejection is respectfully requested and it is respectfully submitted that the claim is allowable. Further, with respect to dependent claims 3-8, 10-18, and 29, these claims are dependent from claim 1 and therefore are allowable as depending from an allowable claim.

In addition, claims 3 and 5 are further allowable as Nowakowski fails to provide for the further positively recited elements. Nowakowski fails to provide a second switch operating position, much less a second operating position of an at least two positions “wherein in the second operating position of the at least two operating positions the common positive terminal is coupled directly to the standby positive output.” Similarly, claim 5 provides that “only the coupling of the positive output of the main battery and the positive output of the at least one standby battery are switched by the switching device.” Instead the positive output of the 4-volt “cranking” battery (30) is coupled directly to the negative output of the 12-volt “accessory” battery (23). Thus, there is no switching of the positive outputs of either the cranking or accessory batteries and Nowakowski, therefore, cannot anticipate claims 3 and 5 and these claims are separately allowable for these reasons.

Similarly, amended claims 4 and 6 are separately allowable over Nowakowski as Nowakowski fails to provide for the positively recited elements of the claims. Claim 4 positively recites a second operating position, “wherein a main battery is electrically isolated from the at least one standby battery and the electrical system in the second operating position...and the at least one standby battery provides electrical power at startup and during operation of the electrical system.” Similarly, claim 6 provides for a “second operating position of the at least two operating positions,” that,” electrically isolates the main battery from the electrical system and introduces only the at least one standby battery.”

Nowhere does Nowakowski disclose that the accessory battery 23 is electrically isolated from the cranking battery 30, much less in a manner in which the cranking battery

alone provides power at startup and during operation of the electrical system. In fact Nowakowski specifically indicates that the “cranking” battery 30 is only engaged when the system is cranking, i.e. starting, and that the batteries are connected in series, in combination with the accessory battery, from which it is then removed. Therefore, not only is Nowakowski not capable of providing for isolation of one battery from the other, but it cannot provide for a second battery that is available to start and operate the electrical system. Therefore, Nowakowski cannot anticipate claims 3 and 5 and these claims are separately allowable for these reasons.

In the Action on page 6 in section 8, claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nowakowski in view of Tremblay (U.S. Patent Number 4,924,176). Claim 9 depends from claims 1 and 3. Tremblay does not overcome the deficiencies of Nowakowski, as argued above, and because claim 1 is allowable as discussed above and claim 3 additionally recites limitations not taught by the cited prior art, claim 9 is allowable as being dependent from allowable claims. Therefore, such allowance is respectfully requested.

In the Action on page 7 in section 9, claim 19 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nowakowski in view of Hasegawa (U.S. Patent Number 6,639,384). Claim 19 depends from claims 1 and 3. Hasegawa does not overcome the deficiencies of Nowakowski, as argued above, and because claim 1 is allowable as discussed above and claim 3 additionally recites limitations not taught by the cited prior art, claim 19 is allowable as being dependent from allowable claims.

Moreover, with respect to the rejection of claim 19, it is unclear from the rejection why one of ordinary skill would look to Hasegawa and its teaching of a hi/low voltage

conversion system using multiple batteries in parallel and having voltage and amperage sensors to be combined with the teachings of Nowakowski with its two series batteries and field discharge current recharging setup for the cranking battery 40. The action cites column 2, lines 44-49 in support of the supposition that one of ordinary skill in the art would combine these teachings "in order to improve the accuracy of the input circuit." However the cited portion of the Hasegawa reference states:

"Open/close control for the second switch 16b is carried out by the second switch drive circuit 17b connected to a control terminal thereof. The second switch drive circuit 17b drives the second switch 15 in response to a signal from the control circuit 30 and controls the open/close of the second switch 16b. The first detector 18a is provided between the output"

this does not provide support for the cited motivation that one of ordinary skill in the art would incorporate the claimed voltage/amperage sensors of Hasegawa in the device of Nowakowski to "improve the accuracy of the input circuit." In fact, neither reference uses the term "input circuit" and no reference is made to greater accuracy from incorporating voltage or amperage sensors or any need to add further accuracy over the existing control circuit provided in Nowakowski.

Instead, in contravention of the law, the motivation for utilizing voltage/amperage sensors is impermissibly taken from Applicants' disclosure, and not from the prior art. A prima facie case for obviousness must provide a motivation for the combination of references and **"both the suggestion [to combine] and the reasonable expectation of success must be found in the prior art, not in the Applicant's disclosure."** In re Vaeck, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991) (citing In re Dow Chemical Co., 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) (citations omitted, emphasis added)).

Here, the motivation to combine the references came impermissibly from the Applicants' disclosure, and not from the prior art. The prior art of Nowakowski and

Hasegawa provide no motivation for incorporating the voltage/amperage sensors in the fashion suggested in the Action. Moreover, neither reference suggests that greater accuracy could be achieved from the use of voltage/amperage sensors in the manner claimed. As such, a reasonable likelihood of success in producing greater accuracy is not taught in either reference. Hence, the motivation for combining these two references is improper. Thus, the office action fails to make a prima facie case for obviousness as to claim 19, and, it is respectfully submitted, that claim 19 is therefore additionally allowable over the cited art.

In the Action on page 7 in section 10, claims 20-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nowakowski in view of Olson (U.S. Patent Number 6,727,602). Claim 20-27 depend from claims 1 and 3. Olson does not overcome the deficiencies of Nowakowski, as argued above, and because claim 1 is allowable as discussed above and claim 3 additionally recites limitations not taught by the cited prior art, claims 20-27 are allowable as being dependent from allowable claims.

In addition, claims 22-26 are separately allowable over the combination of Nowakowski in view of Olson, as the cited references fail to provide for an input device, a network interfaceable controller, or a Network Operating Center (NOC) as positively recited in claims 22, 24 and 25, respectively. The action fails to even mention these positively recited elements in the rejection. Thus, Nowakowski in view of Olson cannot anticipate claims 22, 24 or 25. Additionally, as claims 23 and 26 depend from claims 22 and 25, these claims are additionally allowable as being dependent from allowable claims 22, 24, and 25.

Further, the mere mention of a wireless communications protocol, as asserted in the action, does not provide sufficient motivation for one of ordinary skill in the art to provide for the positively recited aspects of the claims, namely an input device, a network interfaceable controller, and a NOC. The action fails to make a prima facie case for obviousness in it fails to particularly point out where the positively recited elements of the claims are provided for in the cited art and provides no motivation for combining these positively recited elements.

It is therefore respectfully submitted that, in addition to being dependent from allowable claims 1 and 3, that the action fails to state a prima facie case for rejection of claims 22-26, and thus, it is respectfully submitted that these claims are additionally allowable over the cited art for the reasons discussed above and such allowance is respectfully requested.

In the Action on page 8 in section 11, claim 28 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nowakowski in view of Olson further in view of Hasegawa. Claim 28 depends from claims 1, 3, and 25. Neither Olson nor Hasegawa overcomes the deficiencies of Nowakowski, as argued above, and because claim 1 is allowable as discussed above and claims 3 and 25 additionally recite limitations not taught by the cited prior art, claim 28 is allowable as being dependent from an allowable claim.

In the Action on page 8 in section 12, claims 1, 63 and 65 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dougherty (U.S. Patent Number 5, 316, 868). The action asserts that Dougherty provides for a multiple battery system allowing for low level current to pass from the vehicle generator to reserve battery 204. However, as mentioned in Applicant's specification and clearly shown in the figures 12A-12E of U.S.

Patent No. 5,002,840 to Klenenow et al., as referenced and described in the specification of Dougherty at columns 3, lines 10-25 and referencing the Klenenow patents, the circuits provided in Dougherty cannot isolate the first or main battery from the second or standby battery as the system switches to **A PARALLEL CIRCUIT WHEN THE SECOND BATTERY IS ENGAGED** connecting both positive terminals of the main and secondary batteries.

As indicated in the previous responses, systems like that shown in Dougherty provide recharging and use of one-way charging diodes. U.S. Patent No. 5,002,840 to Klenenow et al. and U.S. Patent No. 5,162,164 to Dougherty et. al. are used as examples in Applicants' specification (see Applicants specification, paragraph 9). These references both use one-way charging diodes to protect and provide charge to a backup battery while operating from a main battery. However, in ALL of these types of designs, the backup battery is engaged in a parallel circuit, coupling the main and standby batteries together, which obviates the one-way charging diode and puts **both** batteries in parallel, leading to the problem of the standby or auxiliary battery having to contend with the load of the discharged main battery in a potential emergency situation. This is a significant drawback to all previous multiple battery systems. Similarly, the newly submitted art Dierker (U.S. Patent No. 6,229,279), provided herein by applicant and cited by the examiner in co-pending prosecution of the parent application, suffers from a similar problem in switching its batteries into a parallel configuration, which can be debilitating in an emergency where the main battery is discharged and draws down the standby or backup battery.

All of the prior art references that include one-way charging or recharging of one battery while another battery is supplying electrical energy to a load, a combination of

loads or any other electrical circuit also requires that *both batteries be combined*, in series or in parallel, during some operational state of the electrical circuit, such as at startup of an engine. During the time that the prior art batteries are combined, *the combined batteries supply electrical energy to the electrical system simultaneously*. **By contrast, and as expressly recited in Applicants' claims, Applicants' apparatus and method are arranged such that the main battery and the standby battery(ies) never supply electrical energy to an electrical system simultaneously.** As a result, Applicants' newly amended claims are believed to be patentable over the prior art of record.

Newly amended claims 1 and 65 clearly and concisely recite that electrical power is supplied to an electrical system from at least one of an at least two batteries or a main battery when the invention's switching device is in a first switch position, exclusive of any of the other batteries. And from another of an at least two batteries or an at least one standby battery when the invention's switching device is in a second switch position, exclusive of any other batteries. Pursuant to all the amended claims, the main battery and the at least one standby battery *never* provide electrical energy to the electrical system *simultaneously*. Additionally, the amended apparatus claims specifically recite a one-way charging circuit configured to facilitate charging of standby battery without permitting it to be engaged to operate the vehicle or electrically couple to the main battery in the first switch position.

Dierker fails to teach or suggest several of the positively recited elements of the amended independent claims. Dierker specifically teaches that, during engine startup, the starter battery 2 and the vehicle electrical system battery 6 supply DC power *simultaneously* to all the identified loads 3, 4, 5, 8. As a result, Dierker's charging circuit

11 does not prevent current flow from the starter battery 2 at startup. Rather, both Dierker's starter battery 2 and Dierker's vehicle electrical system battery 6 jointly and simultaneously supply power during the startup operation. Thus, in contrast to Applicants' claims 1 and 65, Dierker does not provide a one-way charging circuit that prevents current flow from the starter battery 2 (analogous to the standby battery recited in Applicants' claims) at all times during which the vehicle electrical system battery 6 (analogous to the main battery recited in Applicants' claims) is providing electrical power to the electrical system. Additionally, in contrast to all of Applicants' amended independent claims, Dierker does not switch between either a main battery or one or more standby batteries to exclusively provide power to the electrical system, such that both the main battery and the standby battery(ies) *never* supply electrical energy to the load(s) or electrical circuit simultaneously. Moreover, the engine starting mode of Dierker specifically teaches away from Applicants' positively recited claim elements and functionalities. The starting mode or operation for *all* embodiments disclosed in Dierker (FIGs. 1-6) simplifies to an identical electrical schematic of a basic parallel boost system. (See col. 2, lines 45-60) *Both* the vehicle electrical system battery 6 and the starter battery 2 are connected *in parallel* and *simultaneously* supply DC power to the electrical system loads 3, 4, 5, 8 at engine startup, which is diametrically opposite to the recitations of Applicants' newly presented claims.

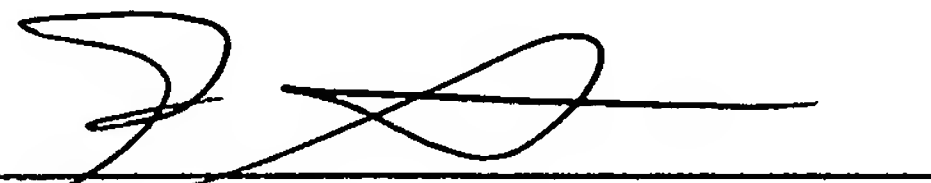
By contrast, the present invention is specifically designed to provide an electrical system operated from either a main battery as the *sole source* of DC power in a first switch position *or* from an at least one standby battery as a *sole source* of DC power in a second switch position, but *never* from both the main battery and at least one standby battery simultaneously. Thus, it is respectfully submitted that the invention, as positively recited

in the claims, is allowable over the art made of record in the case. As such, it is respectfully requested that the amended claims be passed to allowance.

This Amendment is being submitted within the third month following the end of the response period set by the Action and is accompanied by a third month extension of time fee of \$510.00 and an Information Disclosure Statement with \$180.00 fee. If greater or lesser fees are required, please charge or credit Deposit. If greater or lesser fees are required, please charge or credit Deposit Account Number 50-3461 accordingly and notify the undersigned.

THEREFORE, because all objections and rejections have been overcome, it is submitted that claims 1-29, 64 and 65 are allowable, and such allowance is requested. If a telephone interview would further such allowance, the Examiner is invited to telephone the undersigned.

Respectfully submitted,



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EJW
RP-002 3rd non-final Amendment

In the Drawings

The attached replacement drawings include changes to Figs. 8B and 10A AND ARE SUBMITTED AS REPLACEMENT SHEETS. Applicants have hereby amended figure 8B to show a controller 700 having a signal processor, lookup tables, memory devices, and a security protocol/encryption element. Additionally, the indicator element 775 includes an LCD panel and switch sensor 750 is now properly labeled.

Figure 10A has also been amended to include an indicator element 775 with a plurality of indicator lights; in this case these can represent the claimed light emitting diodes. Further, lines indicating an audible indicator issuing from indicator element 775 have been included and can represent the presence of a klaxon, voice, or similar audible alert. Elements 710 and 740 are shown and described (Applicants' specification, paragraph 139) as "sensors [that] can for instance be, but are not limited to, VI sensors".

This set of drawings replaces all prior versions, and listings, of drawings in the application.